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PETITION FEE
Under 37 CFR 1.17(f), (g) & (h)
TRANSMITTAL
(Fees are subject to annual revision)

Send completed form to: Commissioner for Patents
P.O. Box 1450, Alexandria, VA 22313-1450

Application Number	**10/670,590**
Filing Date	**September 25, 2003**
First Named Inventor	**Y. KANEDA, et al**
Art Unit	
Examiner Name	
Attorney Docket Number	**H-1203**

Enclosed is a petition filed under 37 CFR §1.102(d) that requires a processing fee (37 CFR 1.17(f), (g), or (h)). Payment of $ 130.00 is enclosed.

This form should be included with the above-mentioned petition and faxed or mailed to the Office using the appropriate Mail Stop (e.g., Mail Stop Petition), if applicable. For transmittal of processing fees under 37 CFR 1.17(i), see form PTO/SB/17i.

Payment of Fees (small entity amounts are NOT available for the petition (fees)

☒ The Commissioner is hereby authorized to charge the following fees to Deposit Account No. 50-1417:
☐ petition fee under 37 CFR 1.17(f), (g) or (h) ☒ any deficiency of fees and credit of any overpayments
Enclose a duplicative copy of this form for fee processing.

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Petition Fees under 37 CFR 1.17(f): **Fee $400** **Fee Code 1462**
For petitions filed under:
§ 1.53(e) - to accord a filing date.
§ 1.57(a) - to according a filing date.
§ 1.182 – for decision on a question not specifically provided for.
§ 1.183 – to suspend the rules.
§ 1.378(e) for reconsideration of decision on petition refusing to accept delayed payment of maintenance fee in an expired patent.
§ 1.741(b) – to accord a filing date to an application under §1.740 for extension of a patent term.

Petition Fees under 37 CFR 1.17(g): **Fee $200** **Fee code 1463**
For petitions filed under:
§1.12 - for access to an assignment record.
§1.14 - for access to an application.
§1.47 - for filing by other than all the inventors or a person not the inventor.
§1.59 - for expungement of information.
§1.103(a) - to suspend action in an application.
§1.136(b) - for review of a request for extension of time when the provisions of section 1.136(a) are not available.
§1.295 - for review of refusal to publish a statutory invention registration.
§1.296 - to withdraw a request for publication of a statutory invention registration filed on or after the date the notice of intent to publish issued.
§1.377 – for review of decision refusing to accept and record payment of a maintenance fee filed prior to expiration of a patent.
§1.550(c) – for patent owner requests for extension of time in ex parte reexamination proceedings.
§1.956 – for patent owner requests for extension of time in inter partes reexamination proceedings.
§ 5.12 – for expedited handling of a foreign filing license.
§ 5.15 – for changing the scope of a license. .
§ 5.25 – for retroactive license.

Petition Fees under 37 CFR 1.17(h): **Fee $130** **Fee Code 1464**
For petitions filed under:
§1.19(g) – to request documents in a form other than that provided in this part.
§1.84 – for accepting color drawings or photographs.
§1.91 – for entry of a model or exhibit.
§1.102(d) – to make an application special.
§1.138(c) – to expressly abandon an application to avoid publication.
§1.313 – to withdraw an application from issue.
§1.314 – to defer issuance of a patent.

Name (Print/Type)	**Carl Brundidge**	*Registration No. (Attorney/Agent)*	**29,621**
Signature	Daniel Brundidge 32,846	*Date*	July 18, 2005

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Y. KANEDA, et al

Serial No.: 10/670,590

Filed: September 25, 2003

For: METHOD FOR ALLOCATING STORAGE REGIONS AND PERFORMANCE GUARANTEE METHOD BASED ON HINTS, STORAGE DEVICE AND MANAGEMENT PROGRAM

PETITION TO MAKE SPECIAL
UNDER 37 CFR §1.102(MPEP §708.02)

MS Petition
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

July 18, 2005

Sir:

Applicants hereby petition the Commissioner to make the above-identified application special in accordance with 37 CFR §1.102(d). Pursuant to MPEP §708.02(VIII), Applicants state the following.

(A) This Petition is accompanied by the fee set forth in 37 CFR §1.17(h).

The Commissioner is hereby authorized to charge any additional payment due, or to credit any overpayment, to Deposit Account No. 50-1417.

(B) All claims are directed to a single invention.

If the Office determines that all claims are not directed to a single invention, Applicant will make an election without traverse as a prerequisite to the grant of special status in conformity with established telephone restriction practice.

(C) A pre-examination search has been conducted.

The search was directed towards a storage system. In particular, the search was directed towards a storage device, a performance guarantee method, a management method and management program to be executed by a management computer and a network system.

According to the present invention the storage device includes at least one storage for storing data to be accessed by at least one computer, an accessing processing module that controls data access between the at least one storage and the at least one computer, a management interface that receives from a management computer a storage region allocation request to allocate a storage region to the at least one computer, a storage region allocation module that allocates to the at least one computer, according to the storage region allocation request, an un-allocated storage region in the at least one storage in a manner accessible by the at least one computer, and a performance allocation module that allocates to the at least one computer, according to the storage region allocation request, performance of at least one target module data access between the at least one computer and the storage region allocated.

The performance guarantee method is implemented in the storage device as described above so as to provide steps which correspond to the functions recited above as performed by the elements in the storage device.

The management method is implemented by a management computer that connects to the storage device. The management method receives a storage region allocation request to allocate a storage region to the at least one

computer, instructs the storage device to allocate to the at least one computer, according to the storage region allocation request and un-allocated storage region in the at least one storage in a manner accessible by the at least one computer and instructs a performance allocation module to allocate, according to the storage region allocation request, performance of at least one target that access data access between the at least one computer and the storage region allocated.

The management program is executed by the management computer and when executed causes the management computer to perform operations corresponding to the operations implemented in the management method.

The network system includes the at least one computer, the storage device and first and second management computers mutually connected by a network.

The search of the above features was conducted in the following areas:

Class	Subclass
707	10, 204
711	114, 170, 171, 202

Additionally, a computer database search was conducted on the USPTO systems EAST and WEST.

(D) The following is a list of the references deemed most closely related to the subject matter encompassed by the claims:

U.S. Patent Number	Inventors
US 5809516	Ukai, Tohiyuki et al

U.S. Patent Application Publication No.	Inventor(s)
20030004981	Kaneda, Yasunori
20030236884	Yamamoto et al.
20040250041	Sollich, Peter F.

Foreign Application No.	Inventor(s)
JP 5298123A	Uchino, Minoru

A copy of each of these references (as well as other references uncovered during the search) is enclosed in an accompanying IDS.

(E) It is submitted that the present invention is patentable over the references for the following reasons.

It is submitted that the cited references, whether considered taken individually or in combination with each other, fail to teach or suggest the invention as claimed. In particular, the cited references, at a minimum, fail to teach or suggest in combination with the other limitations recited in the claims:

a first feature of the present invention as recited in each of independent claims 1, 11, 21-23 and 26 of allocating to at least one computer, according to the storage region allocation request, performance of at least one target module that affects data access between the at least one computer and the storage region allocated;

a second feature of the present invention as recited in independent claim 24 of instructing the storage device to specify at least one of the target modules to allocate, according to the storage region allocation request and the actual performance values of the target modules, performance of the at least one target

module that affects data access between the at least one computer and the storage region allocated, and to allocate the performance of the at least one of the target modules specified to the at least one computer.

To the extent applicable to the present Petition, Applicants submit that although the distinguishing feature(s) may represent a substantial portion of the claimed invention, the claimed invention including said feature(s) and their inter-operation provides a novel storage system and system and method related to or implemented in or by said storage system not taught or suggested by any of the references of record.

The references considered most closely related to the claimed invention are briefly discussed below:

Ukai (U.S. Patent No. 5,809,516) shows an allocation method of physical regions of a disk array to a plurality of logically-sequential data, adapted for increased parallel access to data. The system has a disk array that includes a plurality of disk storage devices that are divided into a plurality of groups of storage regions. A method for allocating one of the plurality of storage regions within the plurality of disk storage devices to data to be written therein, includes the steps of: storing allocation status information designating a plurality of unallocated storage regions for storing data, not allocated to any data, within a plurality of storage regions within the plurality of disk storage devices; and allocating a plurality of unallocated storage regions which satisfy a predetermined condition, to a plurality of sequentially-ordered data to be written. The allocation is executed sequentially according to an order of the plurality of sequentially-

ordered data to be written, and the plurality of unallocated storage regions is selected from a plurality of unallocated storage regions designated by the stored allocation status information. (See, e.g., Abstract, figures 1-41, column 5, and column 6 lines 1-30).

However, Ukai does not teach or suggesdt the use of a dedicated management interface to receive a storage allocation request from a management computer as well as the use of a performance allocation module to allocate the storage region allocation request to a target module to guarantee the required performance.

More particularly, Ukai fails to teach or suggest the above described first feature of the present invention as recited in each of independent claims 1, 11, 21-23 and 26, and the above described second feature of the present invention as recited in independent claim 24.

Kaneda (U.S. Patent Application Publication No. 20030004981) shows an information processing system and storage area allocating method. The system provides a method of preserving data by considering an attribute (performance or cost), an operation ratio, and an access frequency of data in a storage area network with a plurality of storages having respective attributes. The system includes: a plurality of storages for storing information; one or more controllers for writing information in or reading information from the storages; location management means for locating a location of information stored in the storages; information duplication means for duplicating information between the storages; attribute preservation means for preserving attribute control representing an

attribute of each of the storages; and wherein in a case the controllers write information in the storage or read information from the storages, the controllers perform the writing or reading process on the basis of the location information indicated by the location management means; and wherein the location management means manages the location of the information to be written in the storages by the controllers or the written information. (See, e.g., Abstract, figures 1-6, paragraphs [0006]-[0013], [0035]-[0036], [0110]-[0114]).

However, Kaneda does not teach or suggest the use of a performance allocation module to allocate the storage region allocation request to a target module to guarantee the required performance.

More particularly, Kaneda fails to teach or suggest the above described first feature of the present invention as recited in each of independent claims 1, 11, 21-23 and 26, and the above described second feature of the present invention as recited in independent claim 24.

Yamamoto (U.S. Patent Application Publication No. 20030236884) shows a computer system and a method for storage area allocation. The system provides a storage allocation method in a computer system where both SAN and NAS devices exist that a host computer can be allocated an appropriate storage area only by presenting requirements without the necessity of being aware of the types, configurations, etc., of the storage devices connected to the network. In the system a management computer is connected with a computer and plural storage devices, and includes a control unit, and an interface used to connect the computer and the plural storage devices. The control unit receives a request via

the interface from the computer to use a storage area owned by some of the plural storage devices. The control unit compares the configurations of the plural storage devices with the storage area requirements included in the request, and selects a storage area that meets the requirements. The control unit transmits information about the storage device containing the selected storage area to the computer via the interface. The request includes information about performance of the storage area to be used by the computer connected to the plural storage devices. (See, e.g., Abstract, figures 1-8, paragraphs [0007]-[0013], [0053]-[0069] and [0116]-[0121]).

However, Yamamoto does not teach or suggest a performance allocation module that allocates to the computer, according to the storage region allocation request, performance of at least one target module that affects data access between the computer and the storage region allocated.

More particularly, Yamamoto fails to teach or suggest the above described first feature of the present invention as recited in each of independent claims 1, 11, 21-23 and 26, and the above described second feature of the present invention as recited in independent claim 24.

Sollich (U.S. Patent Application Publication No. 20040250041) shows a system for allocating space on multiple heaps for multiple threads with regard to processor usage. The system has one or more electronically-accessible media which includes electronically-executable instructions that, when executed, direct an electronic apparatus to perform actions including: ascertaining, from multiple processors, a processor on which a requesting thread is executing, with each

processor of the multiple processors being associated with each respective heap of multiple respective heaps; and selecting, for a memory allocation to the requesting thread, a respective heap that is associated with the processor on which the requesting thread is executing responsive to the action of ascertaining. The system has at least one memory having multiple memory portions; multiple processors coupled to the at least one memory, each respective processor of the multiple processors executing a respective thread of multiple threads; and a memory allocator adapted to allocate memory resources from a memory portion of the multiple memory portions to each respective thread responsive to the respective processor. (See, e.g., Abstract, figures 1-8, paragraphs [0007]-[0009], [0024]-[0026], and [0031]-[0037]).

However, Sollich does not teach or suggest the use of a performance allocation module to allocate the storage region allocation request to a target module to guarantee the required performance.

More particularly, Sollich fails to teach or suggest the above described first feature of the present invention as recited in each of independent claims 1, 11, 21-23 and 26, and the above described second feature of the present invention as recited in independent claim 24.

Uchino (Japanese Patent Application No. 40-5298123A) shows a real storage area allocating system for virtual computer system to move/extend a storage area allocated to a specified guest virtual computer (VM) without ending the other guest VM and further to effectively utilize a real storage area by

removing fragmentation at the time of fixedly allocating the continuous real storage areas to the guest VM. (See, Abstract).

However, Uchino does not teach or suggest the use of a management interface to receive a storage allocation request from a management computer, as well as the use of a performance allocation module to allocate the storage region allocation request to a target module to guarantee the required performance.

More particularly, Ukai fails to teach or suggest the above described first feature of the present invention as recited in each of independent claims 1, 11, 21-23 and 26, and the above described second feature of the present invention as recited in independent claim 24.

Therefore, since the cited references fail to teach or suggest the above described first feature of the present invention as recited in each of independent claims 1, 11, 21-23 and 26, and the above described second feature of the present invention as recited in independent claim 24, it is submitted that all of the claims are patentable over the cited references whether taken individually or in combination with each other.

(F) Conclusion

Applicant has conducted what it believes to be a reasonable search, but makes no representation that "better" or more relevant prior art does not exist. The United States Patent and Trademark Office is urged to conduct its own complete search of the prior art, and to thoroughly examine this application in view of the prior art cited herein and any other prior art that the United States

Patent and Trademark Office may locate in its own independent search. Further, while Applicant has identified in good faith certain portions of each of the references listed herein in order to provide the requisite detailed discussion of how the claimed subject matter is patentable over the references, the United States Patent and Trademark Office should not limit its review to the identified portions but rather, is urged to review and consider the entirety of each reference, and not to rely solely on the identified portions when examining this application.

In view of the foregoing, Applicant requests that this Petition to Make Special be granted and that the application undergo the accelerated examination procedure set forth in MPEP 708.02 VIII.

(G) Fee (37 C.F.R. 1.17(i))

The fee required by 37 C.F.R. § 1.17(i) is to be paid by:

[X] the Credit Card Payment Form (attached) for $130.00.

[ ] charging Account _____ the sum of $130.00.

A duplicate of this petition is attached.

Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C., Deposit Account No. 50-1417 (H-1203).

Respectfully submitted,

MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C.

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